REMARKS

Entry of the claims set forth herein is respectfully requested.

Should there be any questions concerning this application, the undersigned may be contacted by telephone at (215) 738-5925.

Respectfully submitted,

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I hereby certify this document has been sent via facsimile on April 30, 2004

Marked-Up version Showing Changes Made in the Claims

- 1. (Twice Amended) Chronic implant apparatus for decreasing pressure in a first portion of a vessel of a cardiac structure of a patient comprising a shunt implanted in a puncture in a septum in the cardiac structure, whereby a volume of blood sufficient to reduce pressure in said first portion is released flows across said septum.
- 2. (Twice Amended) The apparatus of claim 1, wherein the first portion comprises the left ventricle and said pressure is the end diastolic pressure in a patient heart, wherein said shunt is implanted in a septum defining the left ventricle, and wherein the shunt communicates with the left ventricle, whereby a small of blood is released flows across the septum from the left ventricle to reduce the end diastolic pressure.
 - 3. (Original Claim) The apparatus of claim 2, wherein the shunt comprises a passive check-valve that allows flow when a pressure differential between the left ventricle and another chamber of a heart above a threshold pressure, whereby shunting is prevented during left ventricular systole
 - 4. (Original Claim) The apparatus of claim 2, wherein the shunt comprises a passive check-valve that allows flow when a pressure differential between the left ventricle and another chamber of a heart is between a lower threshold and a higher threshold, whereby shunting is prevented during left ventricular systole.
- 5. (Twice Amended) Apparatus for decreasing pressure in a left ventricle of a patient comprising a shunt implanted in a septum communicating with an area outside said first portion the left ventricle, whereby a volume of blood sufficient to reduce end diastolic pressure in a patient flows through the shunt, wherein the shunt comprises a semi-passive check-valve selectively activated by an external signal and communicates with to permit flow from the left ventricle sufficient to reduce the end diastolic pressure.
- 6. (Original Claim) The apparatus of claim 5, wherein an intra-corporeal electrical battery generates said signal.
- 7. (Original Claim) The apparatus of claim 5, wherein signal is generated by an externally coupled energy source.
- 8. (Original Claim) The apparatus of claim 5, further comprising a pump in fluid communication with the shunt and having an input connected to the left ventricle and an output connected to a volume of lower pressure.
- 9. (Original Claim) The apparatus of claim 2, comprising a tubular element having two ends and a tissue affixation element disposed at each of said ends.
- / 10. (Amended) The apparatus of claim & 9, wherein said tubular element is comprised of

a biologically inert non-metallic material.

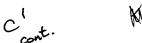
- 11. (Twice Amended) A method of decreasing pressure in a first portion of a vessel of the cardiac structure of a patient comprising the steps of:
 - (a) puncturing a vessel wall between the first portion and another portion; and (b) implanting a shunt communicating with an area outside said first portion, whereby a volume of blood sufficient to reduce pressure in said first portion is released

wherein the first portion comprises the left ventricle and said pressure is the end diastolic pressure in a patient heart; an

wherein said shunt is implanted in a septum defining the left ventricle and communicates with the left ventricle,

whereby a volume of blood is released from the left ventricle sufficient to reduce the end diastolic pressure.

- 12. (Cancelled) The method of claim 11, wherein the first-portion comprises the left ventricle and said pressure is the end diastolic pressure in a patient heart, wherein said shunt communicates with the left ventricle, whereby a small volume of blood is released from the left-ventriele to reduce the end-diastolic pressure.
- 13. (Amended) The method of claim 12 11, further comprising the step of selectively permitting flow when a pressure differential between the left ventricle and another chamber of a heart above a threshold pressure, whereby shunting is prevented during left ventricular systole
- 14. (Amended) The method of claim 12 11, further comprising the step of selectively permitting flow when a pressure differential between the left ventricle and another chamber of a heart is between a lower threshold and a higher threshold, whereby shunting is prevented during left ventricular systole
- 15. (Original Claim) A method of decreasing end diastolic pressure in a left ventricle of a cardiac structure of a patient comprising the step of, further comprising the step of implanting a shunt communicating with the left ventricle and an area outside the left ventricle whereby a volume of blood is released from the left ventricle sufficient to reduce end diastolic pressure is released, and actuating a semi-passive check-valve by an external signal.
- 16. (Original Claim) The method of claim 15, further comprising the step of generating said signal with an intra-corporeal electrical battery.
- 17. (Original Claim) The method of claim 15, further comprising the step of generating said signal with an externally coupled energy source.
- 18. (Original Claim) The method of claim 15, further comprising the step of activating a





pump in fluid communication with the shunt and having an input connected to the left ventricle and an output connected to a volume of lower pressure.

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19. (Original Claim) The method of claim 15, further comprising the step of implanting said shunt, said implanting step comprising the step of deploying a tubular element having two ends and a tissue affixation element disposed at each of said ends via a catheter.

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20. (Original Claim) The method of claim 19, wherein said tissue fixation element is a shape retaining metallic material and further comprising the step of releasing the tissue fixation elements.